App. No. 10/781465
Office Action Dated December 15, 2005
Amd. Dated April 14, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Claims 1-13 are amended.

Listing of Claims:

1. (Currently Amended) Sealing device [[(1)]] for a wheel hub group [[(2)]] connected to a differential device [[(3)]], and provided with a rolling bearing [[(9)], the sealing device [[(1)]] being mounted in such a way as to protect the bearing [[(9)]] from a lubricating fluid for the lubrication of the differential [[(3)]], the sealing device [[and]] comprising:

a first shield [[(22)]] which is integral with an outer race [[(10)]] of the bearing [[(9)]],

a second shield [[(23)]] which is integral with an inner race [[(11)]] of the bearing [[(9)]] and which faces the first shield [[(22)]], and

a dynamic sealing element [[(24)]] which is interposed between the first and second shields ~~(22, 23)~~; ~~the sealing device (1)~~

wherein the second shield [[(23)]] is arranged internally to the first shield [[(22)]] in relation to the bearing [[(9)]], and comprises:

a support portion [[(25)]] which is made of metallic material and which is force fit onto the inner race, [[(11)]] and

an external portion [[(26)]] which is provided with a cylindrical encoder [[(27)]] which is integral with the support portion [[(25)]]; and

wherein the first shield [[(22)]] ~~comprising~~ comprises:

a first cylindrical portion [[(33)]] which is made of metallic material and which is force fit onto the outer race [[(10)]] in a position which is at least coaxial to the encoder

[[(27)]], and [[which]] is provided with at least one slit [[(38)]] ~~which is suitable~~ for being engaged by a sensor [[(39)]] for reading a signal ~~which is~~ generated by the encoder [[(27)]] ~~itself~~.

2. (Currently Amended) Sealing device according to Claim 1, wherein the first shield [[(22)]] comprises a second cylindrical portion [[(34)]] which is made of metallic material, and which is integral with the first cylindrical portion [[(33)]] and which is radially arranged opposite the encoder [[(27)]] in relation to the first cylindrical portion [[(33)]] ~~itself~~.

3. (Currently Amended) Sealing device according to Claim 2, wherein the first shield [[(22)]] comprises a lining [[(41)]] which is made of rubber material and which is arranged at least outside the first and second cylindrical portions ~~(33, 34)~~ and in such a way as to totally close the slit [[(38)]].

4. (Currently Amended) Sealing device according to Claim 3, wherein the [[said]] lining [[(41)]] comprises a base baffle [[(46)]], which closes the [[said]] slit [[(38)]], and which separates and seals the encoder [[(27)]] from the outside of the device [[(1)]] ~~itself~~.

5. (Currently Amended) Sealing device according to Claim 4, wherein [[that]] the [[said]] baffle [[(46)]] is suitable for being placed in contact with a reading surface [[(39a)]] of [[a]] the sensor [[(39)]] for monitoring [[a]] the signal ~~which is~~ generated by the [[said]] encoder [[(27)]].

6. (Currently Amended) Sealing device according to Claim[[s]] 3, wherein the dynamic sealing element [[(24)]] is integral with the lining [[(41)]] and is also integral with the second cylindrical portion [[(34)]].

7. (Currently Amended) Sealing device according to Claim 6, wherein the second cylindrical portion [[(34)]] comprises a support border [[(40)]] for the [[said]] dynamic sealing element [[(24)]]; the support border [[(40)]] being radially turned towards the inside.

8. (Currently Amended) Sealing device according to Claim 7, wherein the first cylindrical portion [[(33)]] comprises two cylindrical bodies ~~(33a, 33b)~~ which have different diameters from each other, and a connecting annular body [[(33c)]] which connects the two cylindrical bodies ~~(33a, 33b)~~; a first cylindrical body [[(33a)]] of the [[said]] two cylindrical bodies ~~(33a, 33b)~~ being force fit onto the outer race [[(10)]] and defining with the annular body [[(33c)]] an edge [[(37)]] which is arranged in such a way as to abut the outer race [[(10)]].

9. (Currently Amended) Sealing device according to Claim 8, wherein the [[said]] lining [[(41)]] comprises a static sealing element [[(47)]] which is arranged around the [[said]] edge [[(37)]] in order to create a static seal with a sealing housing [[(5)]] which extends from the differential [[(3)]] as far as the wheel hub group [[(2)]].

10. (Currently Amended) Sealing device according to Claim 9, wherein the [[said]] static sealing element [[(47)]] is defined by a rounded edge with an external diameter which is greater than the diameter of the [[said]] first cylindrical body [[(33a)]].

11. (Currently Amended) Sealing device according to Claim 1, wherein the support portion [[(25)]] comprises an axially external border [[(32)]] which has a reduced diameter and which defines both an axial striker on the [[said]] inner race [[(11)]], and a static seal on a rolled blocking border [[(12)]] of the inner race [[(11)]] ~~itself~~.

12. (Currently Amended) Sealing device according to Claim 11, wherein the [[said]] external support portion [[(26)]] comprises a cylindrical wall [[(28)]] which is integral with the encoder [[(27)]] and which is radially arranged towards the inside in relation to the encoder [[(27)]] ~~itself~~, and a substantially tapering wall [[(30)]] which is integral with the encoder [[(27)]] ~~itself~~.

13. (Currently Amended) Sealing device according to Claim 1, wherein it is mounted onto a wheel hub group [[(2)]] which is provided with an internal cylindrical passing housing [[(7)]] and closed on an external side by a sealing plug [[(8)]]; the cylindrical housing [[(7)]] being suitable for being engaged in an axially sliding fashion by a terminal portion of an axle shaft [[(4)]] which projects from the [[said]] differential [[(3)]].